

NAME	DESCRIPTION	GROUP	COMMAND	RETURN	NOTES
Brand	Returns brand name	System Commands	BRAND	BRAND	
Model	Returns Model Name	System Commands	MODEL	MODEL	
Version	Returns installed firmware version	System Commands	*ZN01VER01	#VERSION-NUMBER	
Version	Returns installed firmware version	System Commands	*VER#	#VERSION-NUMBER	
Bootloader	Boot to bootloader	System Commands	*BOOT	#BOOT:	Goes into bootlaoder after displaying #BOOT:
Reset	System Reset (to defaults)	System Commands	*RST!	#RESET	Reset non-volatile memory to default values and reboot
Doorbell/Phone Mute	Mute zones for 10 seconds unless UnMute is received	System Commands	*BELL[bitmap]	#MUTE[bitmap]	AD-16x: [bitmap] = FFFF
Doorbell/Phone Unmute	A special case of the Mute command	System Commands	*BELL00	#UNMUTE00	
Associate Zones to Group	-	System Commands	*GRPnGRP[bitmap] Ex: *GRP1GRP95 Bitmap must represent the complete bitmap of the group as the new bitmap will replace the old. (this setting is stored in non-volatile memory)	#GRPnn[bitmap] Ex: #GRP0195 The new bitmap status of Group 1. Will also return an 'All Groups' status unless no groups change.	Note: A zone can only be in one group at a time. Adding it to a group removes it from any previous group n = Group: 4x: 1-4, 8x: 1-8, 16x: 1-F (Hex) AD-16x: [bitmap] = FFFF
Report Zones in Group	-	System Commands	*GRPnSTA01	#GRPnn[bitmap] Same as above	n = Group: 4x: 1-4, 8x: 1-8, 16x: 1-F (Hex)
Group On	Turns a group on using the source that was in use the last time the zone was turned off. (That source is not remembered through a power cycle)	Group Commands	*GRP1PWR01	#GRPnnON[bitmap] The zones in the group that are being turned on (regardless of current status) #ZNON[bitmap] The zones in the group that are now on	
Group Off	Turns the zones in a group off	Group Commands	*GRP1PWR00	#GRPnnOFF[bitmap] The zones in the group that are being turned off (regardless of current status) #ZNON[bitmap] The zones in the group that are now on	
Group Source Assign	Turns the zones in a group to the specified source and turns it on	Group Commands	*GRPnSRCss	GRPnn[bitmap] Ex: #GRP0195 The bitmap is the group's current members	n = Group: 4x: 1-4, 8x: 1-8, 16x: 1-F (Hex) ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16
Group Volume	Set Group Volume (volume of all zones in the group) to specified level	Group Commands	*GRPnVOLvv	#aa,bb,cc,dd,ee,ff,gg,hh Returns the volume for all zones	n = Group: 4x: 1-4, 8x: 1-8, 16x: 0-F (Hex) vv = Volume: 00 - 75 (in -1 db increments, -75 is muted)
Group Volume Up	Raise the volume of each zone in the group by 1. Note: No zone will increment if any zone is at 0 (max on)	Group Commands	*GRPnVOLUP	#aa,bb,cc,dd,ee,ff,gg,hh Returns the volume for all zones	n = Group: 4x: 1-4, 8x: 1-8, 16x: 1-F (Hex)
Group Volume Down	Raise the volume of each zone in the group by 1. Note: No zone will decrement if any zone is at -75 (minimum level)	Group Commands	*GRPnVOLDN	#aa,bb,cc,dd,ee,ff,gg,hh Returns the volume for all zones	n = Group: 4x: 1-4, 8x: 1-8, 16x: 1-F (Hex)
Group Mute On	Mutes the zones in the group	Group Commands	*GRPnMUT01	#GRPnMUT[bitmap] n = Group The bitmap is the group's current members (sb the current mute map)	n = Group: 4x: 1-4, 8x: 1-8, 16x: 1-F (Hex)
Group Mute Off	Unmutes the zones in the group	Group Commands	*GRPnMUT00	#GRPnMUT[bitmap] n = Group The bitmap is the group's current members (sb the current mute map)	n = Group: 4x: 1-4, 8x: 1-8, 16x: 1-F (Hex)
Clear all Groups	Reset group settings for all zones	All Zones Commands	*ZALLGRP00	#GRPALL,00,00,00,00,00,00,00,00	

Zone Status Request - Standard	Status Request for the specified zone - standard request (single line)	Zone Commands	*ZNzzSTA00	#zz,p,m,ss,-vv	zz = Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16 p = Power (1 = On) m = Mute (1 = Muted) vv = Volume: 4/8: 00 - 62 4x/8x/16x: 00 - 75 (in -1 db increments, -75 is muted)
Zone Status Request - Full	Status Request for the specified zone - status return for all parameters (multiple lines)	Zone Commands	*ZNzzSTA01	#ZSS,zz,p,m,ss,-vv #BAL,zz,cc #EQZ,zz,e1,e2,e3,e4,e5,e6,e7,e8 #TRB,zz,bb,tt #BAS,zz,bb,tt	[Same as above] ZSS = Zone Status Standard
Combo Command 1	Combo Command - Type 1	Combo Commands	*C1:zz,p,m,ss,-vv	#zz,p,m,ss,-vv	*C1:02,0,0,04,-32 p and m are ignored for now zz = Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16 p = Power (1 = On) m = Mute (1 = Muted) vv = Volume: 4/8: 00 - 62 4x/8x/16x: 00 - 75 (in -1 db increments, -75 is muted)
Request Tone Settings	-	Zone Commands	*ZNzzSET00	\$zz,+bb,-tt	zz = Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16 +bb = Bass: -12 to +12 in increments of 2 +tt = Treble: -12 to +12 in increments of 2
Zone Power On	Turns a source on using the source that was in use the last time the zone was turned off. (That source is not remembered through a power cycle)	Zone Commands	*ZNzzPWR01	#zz,p,m,ss,-vv	zz = Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16 p = Power (1 = On) m = Mute (1 = Muted) vv = Volume: 4/8: 00 - 62 4x/8x/16x: 00 - 75 (in -1 db increments, -75 is muted)
Zone Power Off	Same as above	Zone Commands	*ZNzzPWR00	Same as above	Same as above
Zone Power Toggle	Same as above	Zone Commands	*ZNzzPWR02	Same as above	Same as above
All Zones On	-	All Zones Commands	*ZALLPWR01	#ZALLON (All zones on) #ZNONFF (Zones On with bitmap)	
All Zones Off	-	All Zones Commands	*ZALLPWR00	#ZALLOFF (All zones off) #ZNON00 (Zones On with bitmap)	
Zone Mute On	-	Zone Commands	*ZNzzMUT01	#zz,p,m,ss,-vv	All Mute needs a bitmap because channels that are off CANNOT be muted zz = Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16 p = Power (1 = On) m = Mute (1 = Muted) vv = Volume: 4/8: 00 - 62 4x/8x/16x: 00 - 75 (in -1 db increments, -75 is muted)
Zone Mute Off	-	Zone Commands	*ZNzzMUT00	Same as above	Same as above
Zone Mute Toggle	-	Zone Commands	*ZNzzMUT02	Same as above	Same as above
All Zones Mute	-	All Zones Commands	*ZALLMUT01	#ZALLMUTFF Zones muted with bitmap	All Mute needs a bitmap because channels that are off CANNOT be muted
All Zones Unmute	-	All Zones Commands	*ZALLMUT00	Same as above	Same as above

Zone Volume Set	Set zone volume to level (turn on the zone if not currently on)	Zone Commands	*ZNzzVOLvv	#zz,p,m,ss,-vv	zz = Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16 p = Power (1 = On) m = Mute (1 = Muted) vv = Volume: (default: -30dB) 4/8: 00 - 62 4x/8x/16x: 00 - 75 (in -1 db increments, -75 is muted) FIX: Vol不能控制固定在-6dB、EQ可調整但up 大於level 0dB要 limit在0dB VAR: Vol可0 - ~ dB控制、EQ可調整但up 大於level 0dB要 limit在0dB
Zone Volume Up	Increases zone volume by 1	Zone Commands	*ZNzzVOLUP	Same as above	Same as above
Zone Volume Down	Decreases zone volume by 1	Zone Commands	*ZNzzVOLDN	Same as above	Same as above
Zone Source Select	Send specified sourceout zones output	Zone Commands	*ZNzzSRCss	Same as above	Same as above
All Zone Source Select	Set all zones to the same source	All Zones Commands	*ZALLSRCss	#ZALL ss *ZNONFF	ss = Source: 4x: 01-04, 8x: 01-08, 16x:01-16
Zone Treble Set	Set Treble level	Zone Commands	*ZNzzTRBcc	\$zz,bb,tt	Treble band: 10kHz Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 cc = Set values for -12dB to 12dB in 2dB steps UP: 02(+02),04,06,08,10,12(+12) Flat: 00 DN: 22(-02),24,26,28,30,32(-12) (+/-)bb = Bass: -12 to +12 in increments of 2 (+/-)tt = Treble: -12 to +12 in increments of 2
Zone Treble Status	Treble Status	Zone Commands	*ZNzzTRB?	#TRB,zz,bb,tt	
Zone Treble Up	Increase treble level by 2	Zone Commands	*ZNzzTRBUP	\$zz,bb,tt	Same as above
Zone Treble Down	Decrease treble level by 2	Zone Commands	*ZNzzTRBDN	\$zz,bb,tt	Same as above
Zone Bass Set	Set Bass level	Zone Commands	*ZNzzBAScc	\$zz,bb,tt	Bass band: 100Hz Zone: 4x: 01-04, 8x: 01-08, 16x:01-16 cc = Set values for -12dB to 12dB in 2dB steps UP: 02(+02),04,06,08,10,12(+12) Flat: 00 DN: 22(-02),24,26,28,30,32(-12) (+/-)bb = Bass: -12 to +12 in increments of 2 (+/-)tt = Treble: -12 to +12 in increments of 2
Zone Base Status	Base Status	Zone Commands	*ZNzzBAS?	#BAS,zz,bb,tt	
Zone Bass Up	Increase bass level by 2	Zone Commands	*ZNzzBASUP	\$zz,bb,tt	Same as above
Zone Bass Down	Decrease bass level by 2	Zone Commands	*ZNzzBASDN	\$zz,bb,tt	Same as above
Zone Balance Set	Set Balance adjustment	Zone Commands	*ZNzzBALcc	#BAL,zz,-bb,-tt	zz = zone (AD-16x:1-16) cc = R-CH atenuationto 01(-1.5dB)~12(-18dB) L-CH atenuationto 21(-1.5dB)~32(-18dB) in 1.5 dB step, Flat:00 bb = L-CH atenuationto 0 to -18 tt = R-CH atenuationto 0 to -18 Example Commands and Returns: *ZN01BAL21 (L-CH 1 step) #BAL,01,-01.5,-00.0 (-01.5: L-CH -1.5dB, -00.0: R-CH 0dB) *ZN01BAL02 (R-CH 2 step) #BAL,01,-00.0,-03.0 (-00.0: L-CH 0dB, -03.0: R-CH -3dB) *ZN01BAL12 (R-CH 12 step) #BAL,01,-00.0,-18.0 (-00.0: L-CH 0dB, -03.0: R-CH -3dB)
Zone Balance Status	Return Balance Status	Zone Commands	*ZNzzBAL?	#BAL,zz,cc	Same as above

Zone EQ Set	Set all EQ's for a zone (8 bands)	Zone Commands	*ZNzzEQZe1,e2,e3,e4,e5,e6,e7,e8	#EQZ,zz,e1,e2,e3,e4,e5,e6,e7,e8	<p>8 band EQ Freq(Hz): 31.5, 63, 250, 500, 1000, 2000, 4000, 16000</p> <p>zz = zone</p> <p>e1-e8 = EQ values for 1-8 bands (-12db to 12dB in 1dB steps)</p> <p>e1-e8 values =</p> <p>UP: 02(+02),04,06,08,10,12(+12)</p> <p>Flat: 00</p> <p>DN: 22(-02),24,26,28,30,32(-12)</p> <p>Example Commands and Returns:</p> <p>*ZN01EQZ32,30,28,26,00,08,10,12</p> <p>#EQZ,01,-12,-10,-08,-06,+00,+08,+10,+12</p> <p>*ZN01EQZ00,00,00,00,00,00,00,00</p> <p>#EQZ,01,+00,+00,+00,+00,+00,+00,+00,+00</p>
Zone EQ Status	EQ Status per Zone	Zone Commands	*ZNzzEQ?	#EQZ,zz,e1,e2,e3,e4,e5,e6,e7,e8	<p>zz = zone</p> <p>e1-e8 = EQ values for 1-8 bands (-12db to 12dB in 2 dB steps)</p>
Zone EQ Band	Set EQ by band for a zone (8 bands)	Zone Commands	*ZNzzEQBbb,ee	#EQZ,zz,e1,e2,e3,e4,e5,e6,e7,e8	<p>zz = zone</p> <p>bb = Band</p> <p>bb values = 01(31.5),02,03,04,05,06,07,08(16000)</p> <p>ee = Value for this Band</p> <p>ee values =</p> <p>UP: 02(+02),04,06,08,10,12(+12)</p> <p>Flat: 00</p> <p>DN: 22(-02),24,26,28,30,32(-12)</p> <p>e1-e8 = EQ values for 1-8 bands (-12db to 12dB in 2 dB steps)</p> <p>Example Commands and Returns:</p> <p>*ZN01EQB01,32</p> <p>#EQZ,01,-12,+00,+00,+00,+00,+00,+00</p> <p>*ZN01EQB08,12</p> <p>#EQZ,01,-12,+00,+00,+00,+00,+00,+00,+12</p>
Zone EQ Preset Load	Load EQ Preset per zone	Zone Commands	*ZNzzEQPpp	#EQP,zz,pp	pp = EQ Preset slot
Zone EQ Preset Save	Save current EQ to a Preset	Zone Commands	*ZNzzEQSpp	#EQP,zz,pp	pp = EQ Preset slot